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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/280,385 03/29/99 HARARI

E. HART, OOELSH
EXAMINER

020227 TM02/0523  
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ART UNIT	PAPER NUMBER
GOSAGE, G	5

2187  
DATE MAILED:

05/23/01

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 3-29-99 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-848. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/>   |

Part II SUMMARY OF ACTION

1. ☒ Claims 63-65 are pending in the application.  
Of the above, claims — are withdrawn from consideration.
2. ☒ Claims 1-62 have been cancelled.
3. ☐ Claims — are allowed.
4. ☒ Claims 63-65 are rejected.
5. ☐ Claims — are objected to.
6. ☐ Claims — are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on —. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-848).
10. ☒ The proposed additional or substitute sheet(s) of drawings, filed on 3-29-99 has (have) been ☒ approved by the examiner ☐ disapproved by the examiner (see explanation) subject to drafting review.
11. ☐ The proposed drawing correction, filed —, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. —; filed on —.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev. 2/93)

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A new title such as --Semiconductor Disk Device Including A Flash Memory And An Address Conversion Table For Converting Sector Address Information-- is suggested. See claim 63, lines 1-2 and 6, e.g. The loss in brevity of title is more than offset by the gain in its informative value in indexing, classifying, searching, etc. See MPEP 606 and 606.01.

2. The abstract of the disclosure is objected to because it does not enable one to quickly determine from a cursory inspection the nature and gist of the technical disclosure as required by 37 CFR 1.72(b). It appears the abstract should be amended using language similar to that used in claims 63-65, so that one is able to quickly determine from a cursory inspection the nature and gist of the technical disclosure. {Note, however, the rejection below of claims 63-65 as not being supported by the disclosure as originally filed, as well as 35 U.S.C. 132 and the prohibition against new matter.] For example, in lines 1-2, change "system ... circuits" to --semiconductor disk device-- (note claim 63, line 1, e.g.). Also, one or two sentences should be added describing additionally claimed and disclosed features, such as the address conversion table for converting sector address information, etc.

Appropriate correction is required. See MPEP § 608.01(b).

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3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on March 29, 1999 have been approved by the Examiner, subject to drafting review.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "address conversion table" and the "means for converting" of claim 63, and the logical sector address storage section and physical block<sup>sector</sup> number storage section of claim 65, must be shown or the features canceled from the claims. No new matter should be entered.
5. The disclosure has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the disclosure. The following objections are specifically noted:

**In the specification:**

On page 1, and throughout the specification, updated information (updated status, if appropriate, e.g. should be provided for the parent or related applications.

On page 11, line 31, it appears "incorporate" should be --incorporated-- for clarity.

Again note that these are merely exemplary. The entire specification should be carefully and completely reviewed to ensure that all possible errors are located and corrected.

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**In the claims:**

In claim 63, it appears "electronically" should be changed to --electrically-- for consistency with the specification and the term as commonly used in the art.

Appropriate correction is required.

6. Claims 63-65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 63, and therefore its dependent claims, it is not entirely clear to what a "block" refers here, which has a plurality of sectors and is a unit of erasure for the flash memory (support for language in the specification?).

Also in claim 63, it is not adequately clear to what the "address conversion table" and the "means for converting ... and for accessing" refer in this instance, or how they are connected or related to each other and to the other elements or "means" set forth in the claim such as the "interface means."

Applicants are respectfully reminded that while 35 U.S.C. 112 sixth paragraph permits the use of "means plus function" language in a claim, this provision must always be considered as subordinate to the second paragraph of 35 U.S.C. 112 (see *In re Lundberg*, 244 F.2d at 547-548, 113 USPQ at 534 (CCPA 1979)). If one employs means plus function language in a claim, one

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must set forth an adequate disclosure showing what is meant by that language. If applicant fails to set forth such an adequate disclosure, applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112. See *In re Donaldson Company, Inc.*, 29 USPQ 2nd 1845 (Fed. Cir. 1994).

In the instant case, the language of the specification and claims is such that applicant has failed to provide an adequate disclosure showing to what the "means" for and the "means" for , refer in this instance. The terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description (in this regard, see also 37 CFR 1.75(d)(1)).

In claim 65, it is not entirely clear to what the "logical sector address storage section and physical block number storage section refer in this instance.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pape is cited as disclosing a semiconductor storage apparatus including a plurality of nonvolatile, electrically programmable and erasable flash memory chips similar to the present invention.

Robinson et al is cited as disclosing a storage apparatus and method for mapping around defective sectors including a sector mapping table similar to the present invention.


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Gossage whose telephone number is (703) 305-3820.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



GLENN GOSSAGE  
PRIMARY EXAMINER  
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